



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,424	10/25/2001	Timothy Bowles	C-326	3486

7590 05/05/2004
SUN CHEMICAL CORPORATION
222 Bridge Plaza South
Fort Lee, NJ 07024

EXAMINER

ROBERTSON, JEFFREY

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,424

Applicant(s)

BOWLES ET AL.

Examiner

Jeffrey B. Robertson

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-21, 23 and 25 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 6, 22 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- *) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-5, 7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Weaver et al. (WO 98/10022).

For claims 1 and 9, on page 4, lines 25-29, Weaver teaches the preparation of a dihalosulfonyl compound containing aryl groups along with a diamine in the presence of an acid acceptor. For claims 3-5, on pages 14-24, Table I, Weaver teaches aryl disulfonyl chlorides. For claim 7, on page 25, in Table II, Weaver teaches the diamine $\text{H}_2\text{N}(\text{C}_2\text{H}_4\text{O})_n\text{C}_2\text{H}_4\text{NH}_2$, a polyether containing polymeric amine. On page 13, lines 4-7, Weaver teaches that any of the sulfonyl compounds in Table I may be reacted with any of the diamines in Table II. Since all of the sulfonyl compounds of Table I fall within the definition set forth by applicant, any of these compounds may be reacted with the diamine mentioned above to fulfill applicant's limitations. A genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species is anticipated no matter how many other species are additionally

Art Unit: 1712

named. Ex parte A, 17 USPQ 2d 1716 (Bd. Pat. App. & Inter. 1990) See also In re Sivaramakrishnan, 673 F.2d 1383, 213 USPQ 441 (CCPA 1982).

3. Claims 1-5, 7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Randall (U.S. Patent No. 3,403,200).

For claims 1-5, 7 and 9, in column 2, lines 6-67, Blake teaches the formation of polysulfonamide dyes where a polymeric amine is reacted with a disulfonyl chloride (formula II). In column 4, lines 55-56, Blake teaches 4,4'-bi-phenyldisulfonyl chloride is used as the aromatic disulfonyl chloride, resulting in a polymeric diaryl sulfonamide. In column 2, line 68 through column 3, line 14, Blake teaches that interfacial polymerization can be used to make the polysulfonamides of the patent, where base is added to free the amine. This base acts as an acid acceptor.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1712

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al. (WO 98/10022) as applied to claim 1 above.

For claim 1, Weaver teaches the limitations of the claim as detailed above. On page 12, lines 14-20, Weaver teaches that alkali metal carbonates may be used as acid acceptors. Weaver fails to expressly teach sodium carbonate.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use sodium carbonate as an acid acceptor. The motivation would have been that Weaver teaches the broad genus of alkali metal carbonates. Sodium carbonate is a well-known and common alkali metal carbonate, and thus one of ordinary skill in the art would have been motivated to use such a carbonate in exercising the invention.

Allowable Subject Matter

8. Claims 10-21, 23, and 25 are allowed.

Art Unit: 1712

9. Claims 6, 22, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: for claims 10-21, 23, and 25, the closest prior art references are Weaver and Randall as applied above. Neither one of these references teaches or suggests a method where an oligomer is first prepared, and where the oligomer is reacted with a monoamine or aryl monosulfonyl. For claim 6, Randall is the closest prior art. Randall does not teach or suggest the use of paratoluene sulfonyl chloride. Neither of the references teaches or suggests the use of the polysulfonamides in conjunction with pigments in ink compositions. In fact, Weaver teaches the use of the polysulfonamide dyes instead of pigments as colorants.

Conclusion

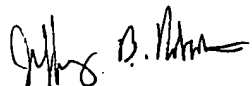
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jones et al. (U.S. Patent No. 2,667,468), Speck (U.S. Patent No. 2,808,394), Blake et al. (U.S. Patent No. 2,994,693), Fletcher et al. (U.S. Patent No. 4,107,155), Fletcher et al. (U.S. Patent No. 4,247,625), Elwakil (U.S. Patent No. 5,574,078), Sacripante et al. (U.S. Patent No. 5,747,554), Kurth et al. (US 2004/0007521 A1), and IBM Technical Disclosure Bulletin, "Photolytically Solubilized Polysulfonamides." December, 1968 are cited for general interest.

Art Unit: 1712

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (571) 272-1092. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeffrey B. Robertson
Primary Examiner
Art Unit 1712

JBR